



ICAO

*International Civil Aviation Organization***WORKING PAPER****Asia and Pacific (APAC)****Twenty-second Meeting of the Meteorological Information Exchange Working Group (MET/IE WG/22)**

Bangkok, Thailand, 18 to 21 March 2024

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**Agenda Item 3: Quality control, monitoring and management of meteorological information exchange****REVIEW OF SIGMET TEST 2023**

(Presented by Singapore)

**SUMMARY**

This paper presents the analysis of the data collected during the WS SIGMET Test that was conducted on 22 November 2023.

**1. INTRODUCTION**

**1.1** The MET Divisional Meeting (2002) formulated Recommendation 1/12 b), Implementation of SIGMET requirements, which called, inter alia, for the relevant Planning and Implementation Regional Groups (PIRGs) to conduct periodic tests on the issuance and reception of SIGMET messages, particularly those for volcanic ash.

**1.2** Information on the requirements for the dissemination and exchange of SIGMET is published in the Asia/Pacific Regional SIGMET Guide (10th edition Oct 2022). This document also outlines the procedures for conducting SIGMET tests. The test procedures encompass the three types of SIGMETs, namely

- SIGMET for Volcanic ash (WV SIGMET)
- SIGMET for Tropical cyclones (WC SIGMET)
- SIGMET for other weather phenomena (WS SIGMET)

**2. DISCUSSION****2.1** WS SIGMET Test 2023 data

**2.1.1** The WS SIGMET Test 2023 was conducted on 22 November 2023.

**2.1.2** RODB Bangkok, RODB Brisbane, RODB Tokyo, RODB Nadi, RODB Singapore and the Regional OPMET Centre (ROC) London provided reception summaries of the WS SIGMET Test 2023 to RODB Singapore, which is the WS SIGMET test focal point in the Asia/Pacific

region. The summarized data reception of the five Asia/Pacific RODBs and ROC London is shown in Appendix 1.

## 2.2 Test results and data analysis

### 2.2.1 State and MWO Issuance

- 26 of the possible 29 States listed in the Asia/Pacific SIGMET Guide participated in WS SIGMET Test 2023. The following three States did not issue WS SIGMET test messages in 2023:

1	<b>AFGHANISTAN, KABUL (OAKB)</b>
2	DPR KOREA, SUNAN (ZKPY)
3	NAURU, NAURU (ANYN)

Table 1: States that did not participate in WS SIGMET Test 2023

2.2.2 Afghanistan has yet to participate in any WS SIGMET Tests to date.

2.2.3 The State participation rate was 90%, which is an improvement when compared to WS SIGMET test 2022 (86%) and WS SIGMET test 2021 (79%).

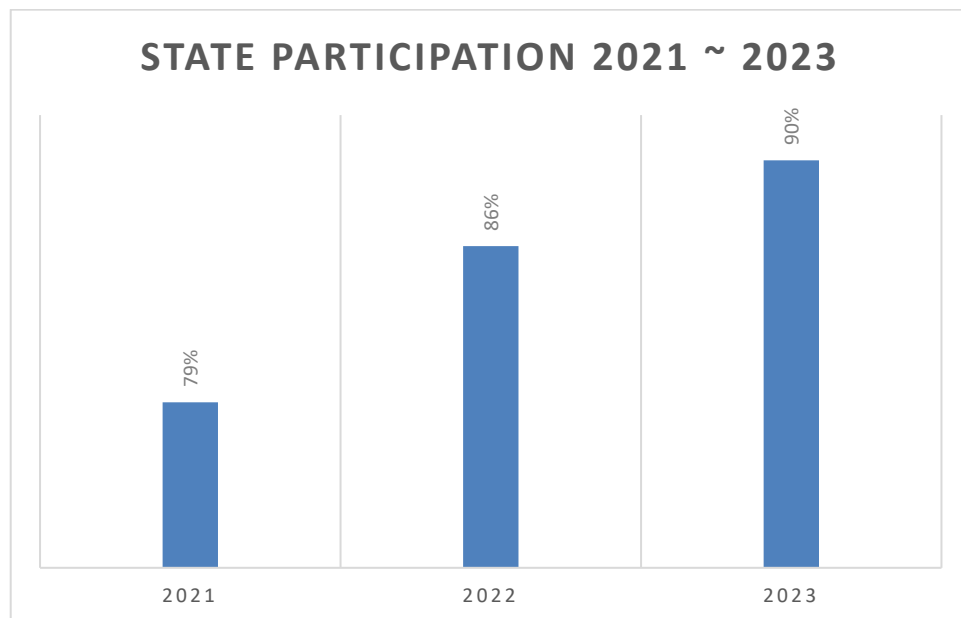


Figure 1: Comparison of state participation for WS SIGMET test over the years

2.2.4 Disregarding the three States that did not participate, 49 WS SIGMET test messages were issued by the MWOs in the WS SIGMET Test 2023.

## 2.3 WS Test SIGMET Reception

2.3.1 The reception of WS SIGMET test by the five Asia/Pacific RODBs and ROC London is listed in Table 2 below:

WS SIGMET Test 2023	RODB Bangkok	RODB Brisbane	RODB Singapore	RODB Tokyo	RODB Nadi	ROC London	Total
Number of Reception	46 of 49	47 of 49	48 of 49	49 of 49	42 of 49	48 of 49	280 of 294
Percentage of Reception	94%	96%	98%	100%	86%	98%	95%

Table 2: Asia Pacific RODBs' and ROC London's Reception of WS Test SIGMET

### 2.3.2

A comparison of the WS SIGMET test reception rate between 2021 and 2023 is presented in Figure 2. It shows the reception rate remains high over the years, with majority of the reception rate achieving 90% or more.

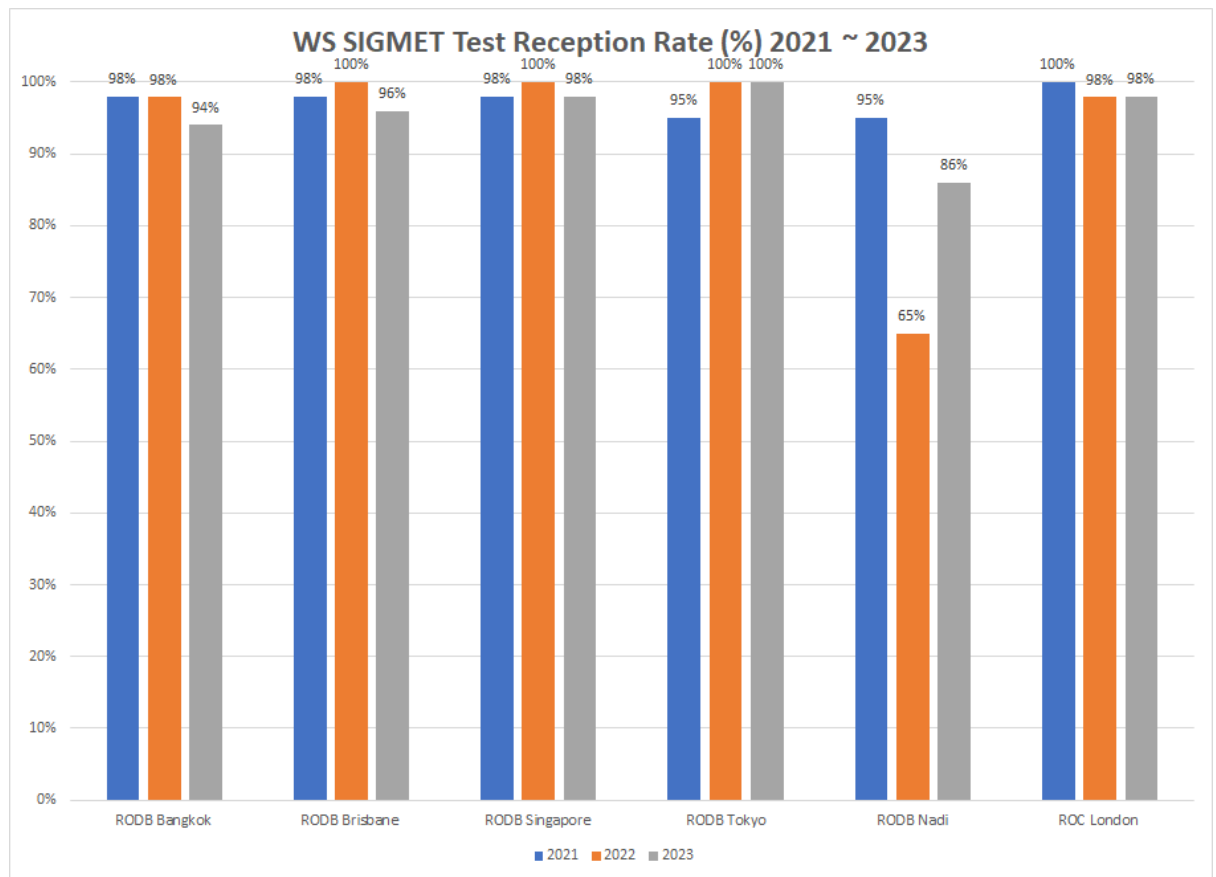


Figure 2: WS SIGMET Test Reception Rate for Past 3 Years

## 2.4

ICAO meteorological information exchange model (IWXXM)

### 2.4.1

Following the provisions of ICAO Annex 3, the test messages (for SIGMET and for volcanic ash and tropical cyclone advisory information) should be disseminated in the ICAO meteorological information exchange model (IWXXM) form in addition to the dissemination of the test messages in abbreviated plain language and alphanumeric form following the templates provided in Annex 3.

### 2.4.2

For the WS SIGMET test 2023, the following MWOs disseminated the test messages in IWXXM format in addition to Traditional Alphanumeric Code (TAC) format: Brisbane,

Melbourne, Taipei, Nadi, Tokyo, Port Moresby, Wellington, Tahiti, Honiara, Singapore  
Hong Kong China and Bangkok.

## **2.5 CONCLUSION**

- 2.5.1 Three of the 29 States, namely Afghanistan, DPR Korea and Nauru did not participate in WS SIGMET Test 2023. The State participation rate was 90%, which is an improvement when compared to WS SIGMET test 2022 (86%) and WS SIGMET test 2021 (79%).
- 2.5.2 The average reception rate of the WS SIGMET test 2023 messages of the five Asia/Pacific RODBs and ROC London was 95%, two percent higher than the WS SIGMET test 2022 result of 93%.
- 2.5.3 The issues on incorrect use of the priority and formatting errors in the text of the test messages persist in WS SIGMET test 2023.

## **3. ACTION BY THE MEETING**

### **3.1 The meeting is invited to discuss the following:**

- a) the results of the WS SIGMET test presented above; and
- b) the necessary follow-up issues arising from the WS SIGMET Test 2023.

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MET/IE WG/22  
Appendix A to WP/17

**APPENDIX [A] Summary of WS SIGMET Test 2023 Results Received from Asia Pacific RODBs and ROC London**

State	Meteorological Watch Office (MWO)			SIGMET Guide			Transmitted Header					RODB and EUR ROC Reception					
	Location	MWO	TTAAii	CCCC	FIR	Priority	TTAAii	CCCC	YGGggg	MWO	FIR	VTBB	YBBN	WSSS	RJTD	NFFN	EBBR
AFGHANISTAN	KABUL	OAKB	WSAH31	OAKB	OAKX												
AUSTRALIA	BRISBANE	YBRF	WSAU21	YBRF	YBBB	FF	WSAU21	YBRF	220203	YBRF	YBBB	02:05	02:04	02:03	02:03	02:03	02:05
	BRISBANE	YBRF	WSAU21	YBRF	YMMM	FF	WSAU21	YBRF	220204	YBRF	YMMM	02:06	02:06	02:04	02:04	02:04	02:06
	MELBOURNE (RFC)	YMRF	WSAU21	YMRF	YMMM	FF	WSAU21	YMRF	220208	YMRF	YMMM	02:10	02:10	02:08	02:08		02:10
	MELBOURNE (WMC)	YMMC	WSAU21	YMMC	YBBB	FF	WSAU21	YMMC	220148	YMMC	YBBB	01:48	01:50	01:48	01:48	01:48	01:50
	MELBOURNE (WMC)	YMMC	WSAU21	YMMC	YMMM	FF	WSAU21	YMMC	220148	YMMC	YMMM	01:48	01:50	01:48	01:48	01:48	01:50
BANGLADESH	DHAKA	VGHS	WSBW20	VGHS	VGFR	FF	WSBW20	VGHS	220200	VGHS	VGFR	02:06	02:06	02:05	02:05	02:05	02:06
CAMBODIA	PHNOM PENH	VDPP	WSKP31	VDPP	VDPF	FF	WSKP31	VDPP	220200	VDPP	VDPF	02:00	02:02	02:00	02:00	02:00	02:01
CHINA	BEIJING	ZBAA	WSOI33	ZBAA	ZBPE	FF	WSOI33	ZBAA	220200	ZBAA	ZBPE	02:02	02:02	02:00	02:00	02:00	02:02
	CHENGDU	ZUUU	WSOI36	ZUUU	ZPKM	FF	WSOI36	ZUUU	220205	ZUUU	ZPKM	02:06	02:07	02:05	02:05	02:05	02:07
	GUANGZHOU	ZGGG	WSOI35	ZGGG	ZGZU	FF	WSOI35	ZGGG	220200	ZGGG	ZGZU	02:01	02:02	02:00	02:00	02:00	02:02
	HAIKOU	ZJHK	WSOI35	ZJHK	ZJSA	FF	WSOI35	ZJHK	220200	ZJHK	ZJSA	02:01	02:02	02:00	02:00	02:00	02:01
	HONG KONG	VHHH	WSSS20	VHHH	VHHK	FF	WSSS20	VHHH	220200	VHHH	VHHK	02:01	02:02	02:00	02:00	02:00	02:02
	SHANGHAI	ZSSS	WSOI34	ZSSS	ZSHA	FF	WSOI34	ZSSS	220200	ZSSS	ZSHA	02:02	02:02	02:01	02:01	02:01	02:02
	SHENYANG	ZYTX	WSOI38	ZYTX	ZYSH	FF	WSOI38	ZYTX	220205	ZYTX	ZYSH	02:06	02:06	02:04	02:04	02:00	02:06
	TAIBEI	RCTP	WSOI31	RCTP	RCAA	FF	WSOI31	RCTP	220204	RCTP	RCAA	02:06	02:05	02:04	02:00	02:04	02:06
	URUMQI	ZWWW	WSOI39	ZWWW	ZWUQ	FF	WSOI39	ZWWW	220200	ZWWW	ZWUQ	02:02	02:02	02:00	02:00	02:00	02:02
	WUHAN	ZHHH	WSOI45	ZHHH	ZHHW	FF	WSOI45	ZHHH	220201	ZHHH	ZHHW	02:02	02:03	02:01	02:01	02:01	02:03
DPR KOREA	SUNAN	ZKPY	WSKR31	ZKPY	ZKPK												
	XIAN	ZLXY	WSOI37	ZLXY	ZLHW	FF	WSOI37	ZLXY	220205	ZLXY	ZLHW	02:10	02:09	02:07	02:07	02:05	02:08
FIJI	NADI	NFFN	WSFJ01.02	NFFN	NFFF	FF	WSFJ03	NFFN	220205	NFFN	NFFF	02:08	02:06	02:05	02:05	02:05	02:06
FRENCH POLYNESIA	TAHITI	NTAA	WSPF21.22	NTAA	NTTT	FF	WSPF21	NTAA	220200	NTAA	NTTT	02:01	02:02	02:00	02:00	02:00	02:02
INDIA	CHENNAI	VOMM	WSIN31	VOMM	VOMF	FF	WSIN31	VOMM	220200	VOMM	VOMF	02:13	02:14	02:13	02:00	02:00	02:13
	KOLKATA	VECC	WSIN31	VECC	VECF	FF	WSIN31	VECC	220200	VECC	VECF	02:00	02:01	02:00	02:00		02:02
	MUMBAI	VABB	WSIN31	VABB	VABF	FF	WSIN31	VABB	220200	VABB	VABF	02:02	01:58	01:56	01:56	02:00	01:58
	NEW DELHI	VIDP	WSIN31	VIDP	VIDF	FF	WSIN31	VIDP	220200	VIDP	VIDF	02:01	02:01	02:00	02:00		02:02
INDONESIA	JAKARTA	WIII	WSID20	WIII	WIIF	FF	WSID20	WIII	220200	WIII	WIIF	02:00	02:01	02:00	02:00	02:00	02:01
	MAKASSAR	WAAA	WSID21	WAAA	WAAF	FF	WSID21	WAAA	220200	WAAA	WAAF	02:01	02:02	02:00	02:00	02:00	02:02
JAPAN	TOKYO	RJTD	WSJP31	RJTD	RJJJ	FF	WSJP31	RJTD	220205	RJTD	RJJJ	02:09	02:07	02:05	02:05	02:05	02:07
LAO PDR	VIENTIANE	VLVT	WSLA31	VLVT	VLVT	FF	WSLA31	VLVT	220205	VLVT	VLVT	01:54	01:56	01:54	01:54	02:05	01:56
MALAYSIA	KUALA LUMPUR	WMKK	WSMS31	WMKK	WMFC	FF	WSMS31	WMKK	220203	WMKK	WMFC	02:04	02:05	02:03	02:03	02:02	02:05
	KUALA LUMPUR	WMKK	WSMS31	WMKK	WMFC	FF	WSMS31	WMKK	220202	WMKK	WMFC	02:02	02:03	02:02	02:02	02:02	02:04
MALDIVES	MALE	VRMM	WSMV31	VRMM	VRMF	FF	WSMV31	VRMM	220200	VRMM	VRMF	03:15	03:14	03:12	03:12	02:00	03:13
MONGOLIA	ULAANBAATAR	ZMUB	WSMO31	ZMUB	ZMUB	FF	WSMO31	ZMUB	220200	ZMUB	ZMUB				02:00		02:02
MYANMAR	YANGON	VYYY	WSBM31	VYYY	VYYF	FF	WSBM31	VYYY	220200	VYYY	VYYF	02:02	02:03	02:01	02:01	02:00	02:02
NAURU	NAURU	ANYN	WSNW20	ANYN	ANAU												
NEPAL	KATHMANDU	VNKT	WSNP31	VNKT	VNSM	FF	WSNP31	VNKT	220200	VNKT	VNSM	02:01	02:02	02:00	02:00	02:00	02:02
NEW ZEALAND	WELLINGTON	NZKL	WSNZ21	NZKL	NZZC	FF	WSNZ21	NZKL	220201	NZKL	NZZC	02:02	02:03	02:02	02:02	02:02	02:03
	WELLINGTON	NZKL	WSPS21	NZKL	NZZO	FF	WSPS21	NZKL	220200	NZKL	NZZO	02:01	02:02	02:00	02:00	02:00	02:02
PAKISTAN	KARACHI	OPKC	WSPK31	OPKC	OPKR	FF	WSPK31	OPKC	220200	OPKC	OPKR	02:01	02:01	02:00	02:00	02:00	02:02
	LAHORE	OPLA	WSPK31	OPLA	OPLR	FF	WSPK31	OPLA	220200	OPLA	OPLR	02:01	02:02	02:00	02:00	02:00	02:02
PAPUA NEW GUINEA	PORT MORESBY	AYPY	WSNG20	AYPY	AYPM	FF	WSNG20	AYPY	220201	AYPY	AYPM		3:00	02:59	02:59	02:59	
PHILIPPINES	MANILA	RPLL	WSPH31	RPLL	RPHI	FF	WSPH31	RPLL	220201	RPLL	RPHI		02:02	02:01	02:01		02:02
REPUBLIC OF KOREA	INCHEON	RKSI	WSKO31	RKSI	RKRR	FF	WSKO31	RKSI	220150	RKSI	RKRR	01:48	01:49	01:47	01:47	01:50	01:49
SINGAPORE	SINGAPORE	WSSS	WSSR20	WSSS	WSJC	FF	WSSR20	WSSS	220205	WSSS	WSJC	02:06	02:06	02:05	02:05	02:04	02:06
SOLOMON ISLANDS	HONIARA	AGGH	WSSO20	AGGH	AGGG	FF	WSSO20	AGGH	220635	AGGH	AGGG	06:09			06:07		06:09
SRI LANKA	COLOMBO	VCBI	WSSB31	VCBI	VCCF	FF	WSSB31	VCBI	220200	VCBI	VCCF	02:13	02:15	02:13	02:13	02:13	02:15
THAILAND	BANGKOK	VTBS	WSTH31	VTBS	VTBB	FF	WSTH31	VTBS	220200	VTBS	VTBB	02:01	02:02	02:01	02:00	02:00	02:02
UNITED STATES	HONOLULU	PHFO	WSPA01-13	PHFO	KZAK	FF	WSPA11	PHFO	220200	PHFO	KZAK	02:01	02:01	02:00	02:00	02:00	02:11
	KANSAS CITY	KKCI	WSPN01-13	KKCI	KZAK	FF	WSPN08	KKCI	220205	KKCI	KZAK	02:02	02:04	02:02	02:02		02:04
VIET NAM	GIA LAM	VVGL	WSVS31	VVGL	VVHN	FF	WSVS31	VVGL	220203	VVGL	VVHN	02:09	02:07	02:05	02:05	02:03	02:07
	GIA LAM	VVGL	WSVS31	VVGL	VVHM	FF	WSVS31	VVGL	220205	VVGL	VVHM	02:10	02:09	02:10	02:07	02:05	02:08